Submission by

to the

Electricity Authority

on the

Market Monitoring Review of Structure, Conduct and Performance in the Wholesale Electricity Market

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MARKET MONITORING REVIEW OF STRUCTURE, CONDUCT AND PERFORMANCE IN THE WHOLESALE ELECTRICITY MARKET – SUBMISSION BY BUSINESSNZ ENERGY COUNCIL[1]

INTRODUCTION

1. BusinessNZ Energy Council (BEC) welcomes the opportunity to provide feedback on the Market Monitoring Review of Structure, Conduct and Performance in the Wholesale Electricity Market since the Pohokura Outage in 2018 ('the Information Paper').

2. The Information Paper reviews electricity spot prices (from January 2019 up to and including the first two quarters of 2021) to assess whether electricity spot prices were determined in a competitive environment. The Electricity Authority decided to undertake this review in response to sustained high spot prices since the Pohokura outage, asking if spot prices reflect underlying supply and demand fundamentals.

3. The BEC believes an efficient electricity system is vital for a competitive economy. Electricity is a key input to the production of goods and services for businesses. We support a market-based framework where generators and retailers compete vigorously, businesses and residential consumers trade in a way that enables them to manage their risks at efficient prices, and a stable regulatory and governance framework creates an investment climate where local and international firms feel comfortable enough to risk their capital to invest in the right technology, at the right cost, and at the right time.

4. The Authority has an important role to play to ensure the wholesale electricity market operates competitively and efficiently for the long-term benefit of consumers. We would like to acknowledge the significant time and effort the Authority has committed to conducting this review. The Information Paper provides thorough analysis of recent prices and market events, collecting, analysing and presenting detailed and sophisticated analysis across a number of indicators. Assessing the competitiveness of the industry requires a deep understanding of what is behind the data, whether any trends are temporary or permanent, and an appreciation of the lags between decision-making and market impacts.

5. We note the data do not provide any conclusive evidence to suggest there are competitive issues to be addressed. We acknowledge wholesale prices have been higher over the last three years and agree underlying supply and demand has been a contributing factor. We believe there may be other factors, including increasing uncertainties and risk, which have contributed to higher prices which have not been covered by this review.

6. We urge the Authority to be cautious about the conclusions it draws from this analysis and proposing any changes where there is a lack of evidence. Significant changes are likely to be disruptive. They may or may not improve competition but will almost certainly create greater uncertainty for market participants and may have a negative impact on investor sentiment towards New Zealand. Given the investment at stake in this industry these risks cannot be dismissed as trivial.

7. This submission provides some general comments on the Information Paper, followed by further comments on the Structure, Conduct and Performance framework and proposed indicators.

8. Members have been consulted in preparing this submission. Given the diversity of our membership, some members will have specific issues they wish to comment on in more detail. We have encouraged members to make their own submissions raising those issues specific to their areas of interest. This submission is not confidential.

[1] Background information on the BusinessNZ Energy Council is attached as Appendix One.

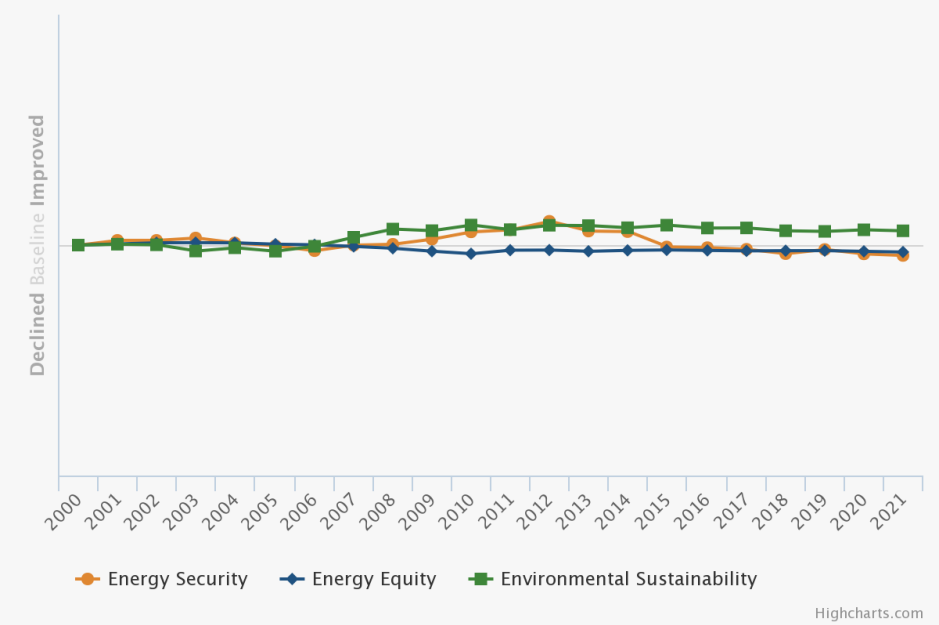
GENERAL COMMENTS

Wholesale prices have been higher over the last three years

9. We acknowledge there have been higher electricity prices in the wholesale electricity market over the last three years. This has been difficult for purchasers, especially large electricity users. This has been particularly challenging over the last two years as businesses have struggled with many interruptions due to Covid and faced a range of increasing costs, not just for fuels, but also raw materials, labour and transport.

10. We note these price increases will not affect all consumers in the same way. For many consumers, retail prices have remained stable. According to our World Energy Council Energy Trilemma Index[2] results, New Zealand's ranks 17th out of 127 countries in terms of energy equity, a measure of access to and affordability of energy. Compared to the baseline year of 2000, our equity score has declined only slightly over the last 20 years, with no significant changes since 2009.

Figure 1: Historical Trilemma Scores: New Zealand

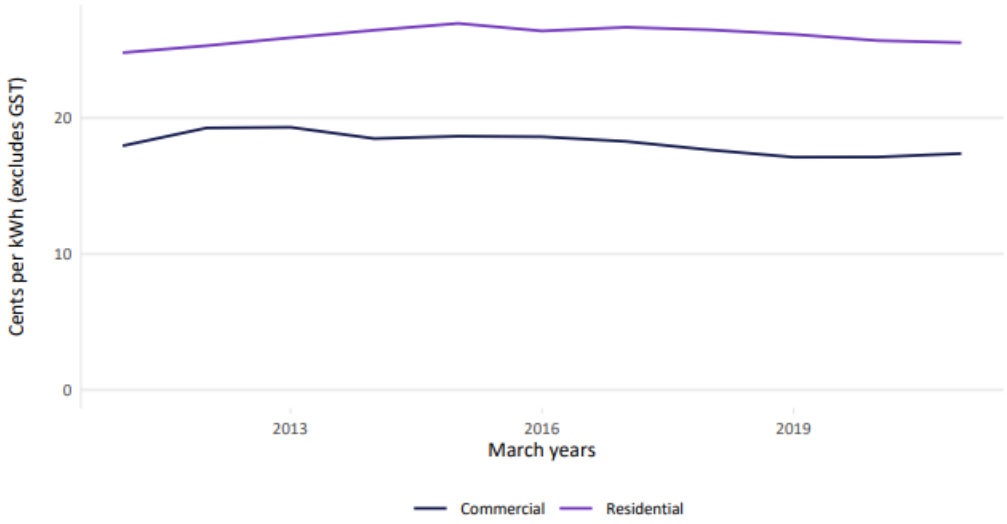


11. This result is supported by Ministry of Business Innovation and Employment's latest annual Energy in New Zealand 2021[3] report which shows higher wholesale prices have not flowed through to retail prices for residential and commercial customers. The MBIE report attributes this to two factors: a decrease in transmission and distribution costs offsetting higher generation costs, and retailers securing sufficient hedging to protect against higher spot prices.

[2] World Energy Council Energy Trilemma Index, https://trilemma.worldenergy.org/

[3] MBIE Energy in New Zealand 2021, p28, https://www.mbie.govt.nz/dmsdocument/16820-energy-in-new-zealand-2021

Figure 2: Trend of retail electricity prices



Underlying supply and demand have driven prices, as has an increase in risk

12. We agree with the Authority's findings that a number of underlying supply and demand factors have contributed to higher prices, including record electricity demand, low hydro inflows, periods of low wind generation, gas supply interruptions affecting gas availability and deliverability as well as regulatory uncertainty and government interventions creating long-term uncertainty over future gas supply.

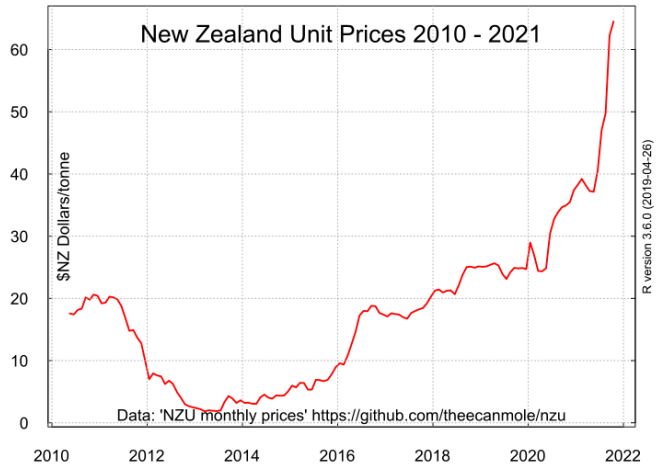
13. The recent Gas Industry Company Gas Market Settings Investigation[4] provides a good overview of supply uncertainty and highlighted a range of multi-faceted risks faced by investors – from technical and commercial, to regulatory, political, environmental and security risks.

14. Similarly hydro generators face future supply uncertainty. If water is not carefully managed the risk is having to spill water, or at the other extreme running out of water altogether, leading to potential shortages, or in the worst case forced outages or blackouts. These kinds of situations would clearly have significant social and economic implications and would increase the likelihood of regulatory intervention.

15. Another area of significant uncertainty for market participants is our climate change response with regular reviews of the Emissions Trading Scheme and Emissions Reduction Plans due to be released by end of May 2022. This Information Paper is silent on the approximate $40 increase in NZU's, the unit price per tonne of emissions, over the period investigated and its impact on wholesale electricity prices.

[4] Gas Industry Company Gas Market Settings Investigation, see p18-19 for a full discussion, https://www.gasindustry.co.nz/work-programmes/gas-market-settings-investigation/developing-2/final/document/7342

Figure 3: New Zealand Carbon Unit prices 2010-2012



16. The Information Paper notes '*it is not possible to definitively conclude whether all of the increase in prices due to underlying conditions, including uncertainty about future gas supply from existing fields, or if some of the increase is due to prices not being determined in a competitive environment.'* We agree the data do not provide conclusive evidence of any competition issues.

Higher prices provide a signal to invest in new generation

17. Increased demand and constrained supply have led to higher prices, signalling for investment in new generation. For the most part, we have avoided the worst effects of supply shortages such as official conservation campaigns and widespread outages[5].

18. We expect significant investment to be developed in the near term. BEC has developed a New Zealand specific model (TIMES-NZ) to explore two possible future energy scenarios; Kea (cohesive) where climate change is prioritised as the most processing issue, and Tūī (individualist) where climate change is one of many pressing issues. Our bottom-up model selects from available technologies to produce a least-cost energy system over the medium to long term.

19. According to our modelling, electricity generation is likely to increase significantly as demand for clean energy for the industrial, commercial and residential sectors grows. Electricity demand is projected to increase from 144PJ in 2018, to 270PJ in 2050. This demand is likely to be met by large increases in wind and solar generation.

[5] The disconnections on the 9 August which affected 34,000 customers is one arguable exception, although investigations suggest the disconnection was related to implementation issues, rather than a lack of supply capacity.

Figure 4: Kea – Electricity Generation for all subsectors, all end use, all technology (PJ)

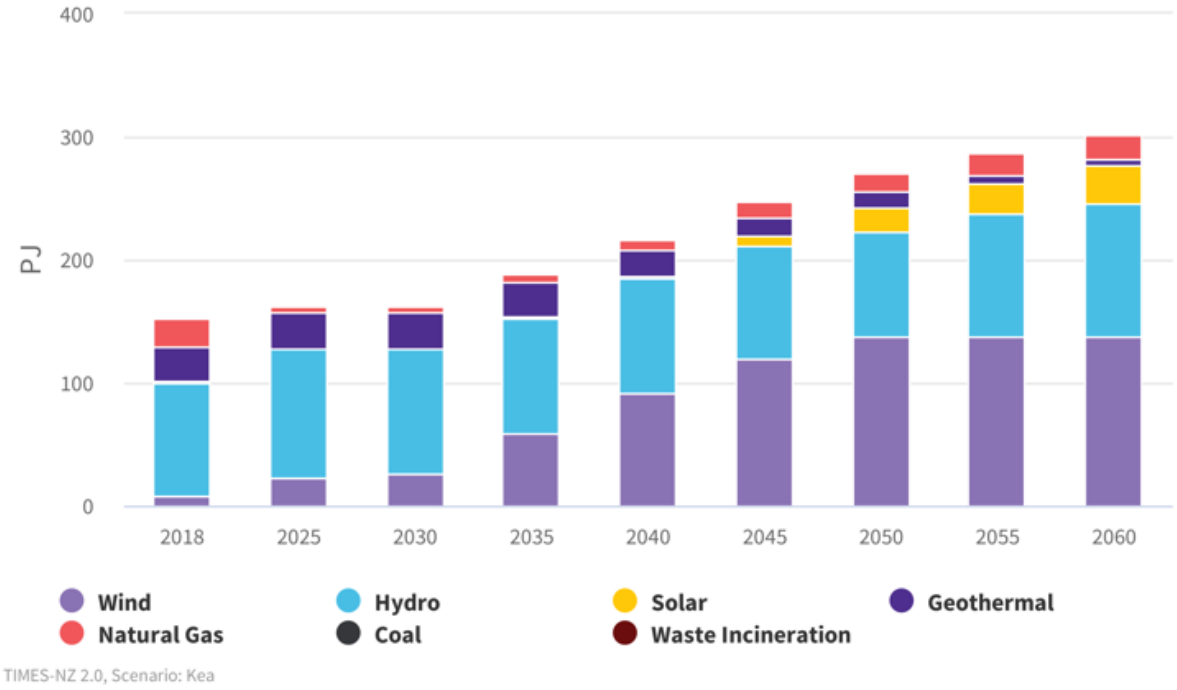
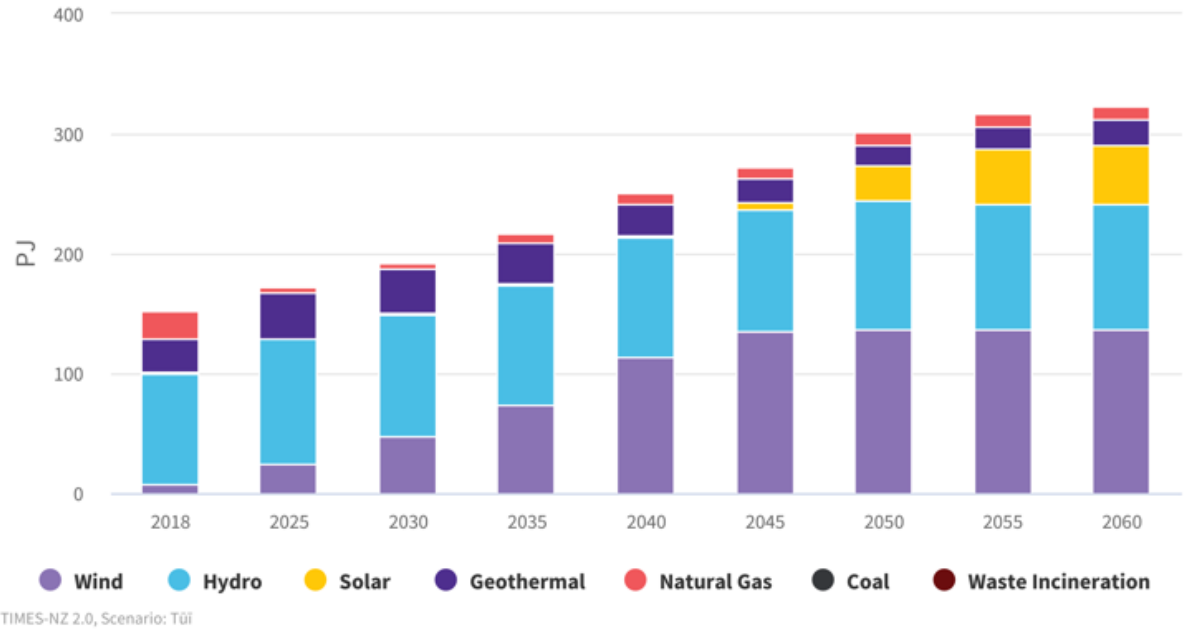


Figure 5: Tūi – Electricity Generation for all subsectors, all end use, all technology (PJ)



20. In fact, we have seen signs of new generation development already. Transpower has received record enquiries for connecting new wind and solar generation, with the total number of enquiries jumping from 23 in the 2019/20 financial year to 63 in the 2020/21 financial year.[6] Incumbent generators are investing in wind – Genesis/Tilt developing Waipipi wind farm, Mercury progressing Turitea (Stage 1 2021, with another stage to be completed in 2023) and Meridian committing to Harapaki. Contact and Top Energy are developing and expanding generation

[6] Energy News, Connection enquiries on track to double - Transpower, https://www.energynews.co.nz/news/electricity-transmission/110779/connection-enquiries-track-double-transpower

assets at Tauhara and Ngawha respectively. Encouragingly, a number of new entrants have indicated plans to develop solar across the country[7].

21. Prices are expected to decline as new generation becomes available. The addition of new generation, and solar in particular, will increase our energy diversity, not only by fuel, and location, but also by provider. Importantly, this investment has all been planned on the basis of the existing wholesale market arrangements. It cannot be assumed that investments on this scale will necessarily proceed without disruption in the face of significant potential changes to the current wholesale market.

Keeping the broader, long-term view in mind

22. The Information Paper focuses on high wholesale prices over the last three years. This is a relatively short timeframe for just one segment of the market. There is limited discussion of secondary markets, (over-the-counter contracts, power purchase agreements, or the futures market) which appear to be gaining momentum, and how they interact with the spot market. In particular they are likely to offer greater pricing certainty to larger industrial consumers.

23. Investments in the generation and transmission assets required to supply electricity are large, lumpy and long term. For example, our TIMES-NZ model assumes a lifetime of 25 years for all existing assets. A review of prices over such a short timeframe could hide trends associated with long-term asset investment and policy conclusions based on a short timeframe are likely to be more risky than those based on a longer time period.

24. Given there are no capacity markets or subsidies in New Zealand, the spot market must cover short-run marginal costs for generators, and long-run marginal costs as well as providing the incentive for investment in new generation. Therefore, it is entirely reasonable to expect prices to exceed the short-run and long-run marginal costs for a period of time. Were this not the case investment in necessary peaking plant would be inherently uneconomic.

25. We note the TIMES-NZ model shows an ongoing role for gas as an input to electricity generation as increasing intermittent renewable generation is connected to the system. It is important the relationship between gas and electricity supply is well understood to ensure ongoing gas supply for electricity security of supply.

26. The Gas Market Settings Investigation determined two key solutions to address risk – the formation of a Gas Transition Pathway and the formation of commercial contracts. We agree with Gas Industry Company that a commercial solution to gas supply or electricity security of supply should be explored before other interventions are considered, and that such a solution is not only feasible but has been executed with success in the past.

Caution before proceeding with changes

27. The Information Paper finds inconclusive evidence to suggest there are competition issues to be addressed -as the paper itself acknowledges. The Authority has already introduced new trading conduct provisions to address the potential exercise of market power. The new rules have been in development for several years and came into effect in June 2021. Enforcement of those rules should address any potential issues with the exercise of market power.

28. Accordingly, the Authority should be careful in the conclusions it draws and in proposing any changes. Significant changes are likely to be disruptive. They may or may not improve competition but will almost certainly create greater uncertainty for market participants and deter investment. These outcomes are likely to affect all classes of consumers adversely, not merely the more limited class who have **perhaps** been adversely affected by an absence of wholesale competition.

29. We support the development of a long-term energy strategy which considers the energy system as a whole (considering electricity, gas and other fuels) to help ensure a smooth transition to a low-emissions economy.

[7] A full list of New Plant Developments is available in MBIE's Energy In New Zealand 2021 report, p30, https://www.mbie.govt.nz/dmsdocument/16820-energy-in-new-zealand-2021

SPECIFIC COMMENTS ON PROPOSED INDICATORS

30. We recognise the Authority's role to monitor the market, and fully support implementing an appropriate framework to do so.

31. As noted in the Authority's 2011 Information Paper Industry and market monitoring: Competition[8], we agree that '*no single indicator – or set of indicators – will provide definitive information on the competitiveness the electricity market in New Zealand. Assessing the competitiveness of the industry requires a deep understanding of what is driving a suite of indicators, whether these are temporary or permanent trends and how the lags between decision-making and market impacts operate*.'

32. To the extent possible, we believe the measures should be easy to interpret, based on information, which is easily observable and timely, and should not introduce any undue barriers to participation in the market.

33. As demonstrated in our scenarios, we anticipate significant change in the electricity sector landscape. This will not only affect the type of generation connecting to the grid, but also the size and nature of those connections. As we move to a more sustainable energy system, we expect further intermittent renewable resources, and anticipate greater demand-side participation with distributed energy resources, and manageable demand. Indicators should be aware of these potential changes and should be either enduring, or able to be adapted to allow for anticipated changes.

34. The Authority could consider including indicators for:

- demand-side measures such as buyer concentration, buyer satisfaction or confidence, demand side participation in spot market price discovery, or other measures of the levels of demand response capacity available,
- collaborate with the Gas Industry Company to develop measures relevant to the electricity sector, including measures to relieve gas market uncertainty through improved information disclosure,
- forward market indicators such as ASX open interest, ASX traded volumes, over-the-counter hedge traded volumes, and power purchase agreement interest.

35. It remains unclear how the Authority intends to implement this monitoring framework and how this framework relates to other regular reporting. We would like to see further details about how the framework would be implemented and evaluated. In particular we are interested in what information may be required from market participants, how the information will be used and stored, and the relationship between this monitoring framework and the Authority's compliance and enforcement functions for the new trading conduct rules.

36. Further comments on each of the specific indicators are provided in the table below.

[8] Electricity Authority, Industry and market monitoring: Competition Information Paper, p10, https://www.ea.govt.nz/assets/dms-assets/11/11525Industry-market-monitoring-information-paper.pdf

Table 1: Comments on Market structure, conduct and performance indicators

	Measure	Indicator	Comments
Market Structure	**Seller concentration**	Seller concentration	This is a simple measure, although we note it is limited in addressing electricity market intricacies. We question if this indicator should be green given the trend over time, and note a number of the indicators appear to be inconsistent with the evidence presented. We would expect this trend to continue with new generation entrants, although we note a large project such as Lake Onslow has the potential to impact this indicator negatively. The Authority could consider including a buyer concentration measure.
		Gross pivotal	Given the relatively small size of our market, and the large investment required in generation assets we are unsurprised by this finding. We do not believe this result is necessarily poor, but merely a reflection of how the physical assets and market have developed over time, and fuel availability of different generators over the review period. It is not clear why the Authority has not also assessed the net pivotal indicator that it normally uses in its Market Performance Quarterly reviews. We believe Net Pivotal is a richer indicator as it provides information on the ability **and incentive** of generators to exercise market power.
	Barriers to entry	Vertical integration	We agree barriers to entry must be low to ensure a suitably competitive market. We believe vertical integration has been a useful structure to help better manage risk and reduce transaction costs. It is not clear if changes to vertical integration would lead to higher costs due to the loss of scale, which would in turn impact prices. We note the recent development of various Power Purchase Agreements, which suggests barriers to entry may be less of an issue. We would support any further work to investigate any possible barriers to entry. For further comments and potential indicators see Dynamic Efficiency section
Market Conduct	**Price-cost relationship**	Offers over time	We agree the timing of higher offer prices is consistent with low hydro storage conditions and increasing uncertainty around gas supply from Pohokura.
		Percent of offers above cost	Various values have been used to reflect possible costs. We note that input costs can fluctuate significantly, and the assessment of opportunity costs is highly subjective. The DOASA water values represent a lower bound(at best)

			because the Authority does not seem to have assessed whether the DOASA water values would result in realistic hydro storage outcomes or lead to scarcity. The analysis appears to be highly sensitive to the water values used, therefore it is difficult to form any firm conclusions. Similarly, the volume weighted average price for gas may be a poor indicator of Gas Supply Agreement prices as these types of agreements tend to be fixed over a longer term. While the two may trend towards the same value on average, this average value may not reflect the price buyers and sellers are facing as they negotiate GSAs. The beauty of a competitive market is that each participant can assess the opportunity cost and determine their own water value. The diversity of views avoids the risk of over or undervaluing the resource leading to spills or shortages of water or other fuels.
		Relationship of storage to cost	This indicator considers hydro storage and appears to ignore storage of other fuels (although the water values used may have inferred a gas price). The Authority may wish to consider analysis of other fuels such as gas and should work with the Gas Industry Company to develop a better shared understanding of the relationship between electricity and gas and how this is likely to evolve over time.
		Relationship of offers to cost	See previous comments regarding cost assumptions.
		Lerner Index	We note the paper states this indicator is *'very sensitive to the estimate of cost used.'* See previous comments regarding cost assumptions.
	Output	2 percent decrease in demand in the SI	A steeper supply curve would also suggest an increased incentive to invest in new generation (which is what we are seeing now).
		Inter-island price separation	Offers to avoid inter-island price separation should be considered a legitimate and economically rational pricing strategy.
		Trading periods with price separation in pre-dispatch but not in final	No comment
		Trading periods with high prices	The report notes there are many legitimate reasons to offer capacity at higher prices including resource consent obligations, maintenance outages, restrictions on plant availability, conserving fuel for later use, or uncertainty

			over future supply. We note '*the majority of high-priced offers that were dispatched were either priced as they usually were or reflected the fuel scarcity and opportunity cost of operating at the time*.'
		Tiwai contracts event analysis	The Authority has conducted thorough event analysis. While we accept the size of the Tiwai contract does impact on the wider market, we note the Commerce Commission undertook a preliminary enquiry into the matter and decided not to proceed. We are confident there are the appropriate checks and balances in place to ensure competition. We do not believe price discrimination is a pressing issue and do not support the options proposed in the Issues Paper which may or may not improve competition but will certainly have a negative impact on investor sentiment in New Zealand. We agree the uncertainty over Tiwai may have discouraged investment and support the Authority undertaking a review of barriers to new investment.
Market performance	**Pricing trends**	2 percent increase in demand	Analysis seems to signal tighter supply and would support new generation investment. The Authority may wish to consider performance measures beyond price such as buyer satisfaction or confidence.
		Spot market supply curve	We agree the increased steepness of the supply curve can be explained, at least in part, by the change in the market, such as supply disruption and uncertainty due to issues at Pohokura and changes to risk settings for hydro storage management as a result. A steeper supply curve would also suggest an increased incentive to invest in new generation.
		Marginal analysis	An interesting indicator that may provide useful trend information over time although we agree it is difficult to deduce anything about market power from this analysis.
		Actual verses predicted prices	As discussed, we believe the sustained upwards shift in prices since the 2018 Pohokura outage may be explained by uncertainty surrounding future gas supply.
		Forward prices	We agree the forward market has continued pricing for fuel scarcity over Q1-3 2022 as gas maintenance works continue.

			The Authority may wish to consider other indicators in relation to forward contracts such as ASX open interest, ASX traded volumes, over the counter hedge traded volumes, and PPA interest.
	Profitability	Cost to income ratio	No comment
	Dynamic efficiency	Investment	We agree new renewable generation has likely been restrained due to an uncertain investor environment. However, this uncertainty would have existed regardless of the extent of wholesale market competition. The Authority is overly pessimistic about the extent of investment that is occurring. We see the extent of new investment as very positive. The review of new generation provided in section 5.30 is useful. The Authority may wish to consider indicators regarding possible and/or probable future generation.

APPENDIX ONE – BACKGROUND INFORMATION ON THE BUSINESSNZ ENERGY COUNCIL

The BusinessNZ Energy Council (BEC) is a group of New Zealand's peak energy sector organisations taking a leading role in creating a sustainable energy future. BEC is a division of BusinessNZ, New Zealand's largest business advocacy group. BEC is a member of the World Energy Council (WEC). BEC members are a cross-section of leading energy sector businesses, government and research organisations. Together with its members BEC is shaping the energy agenda for New Zealand.

Our vision is to support New Zealand's economic wellbeing through the active promotion of the sustainable development and use of energy, domestically and globally. With that goal in mind, BEC is shaping the debate through leadership, influence and advocacy.

BusinessNZ is New Zealand's largest business advocacy body, representing:

- Regional business groups EMA, Business Central, Canterbury Employers' Chamber of Commerce, and Employers Otago Southland
- Major Companies Group of New Zealand's largest businesses
- Gold Group of medium sized businesses
- Affiliated Industries Group of national industry associations
- ExportNZ representing New Zealand exporting enterprises
- ManufacturingNZ representing New Zealand manufacturing enterprises
- Sustainable Business Council of enterprises leading sustainable business practice
- BusinessNZ Energy Council of enterprises leading sustainable energy production and use
- Buy NZ Made representing producers, retailers and consumers of New Zealand-made goods

BusinessNZ is able to tap into the views of over 76,000 employers and businesses, ranging from the smallest to the largest and reflecting the make-up of the New Zealand economy.

In addition to advocacy and services for enterprise, BusinessNZ contributes to Government, tripartite working parties and international bodies including the International Labour Organisation (ILO), the International Organisation of Employers (IOE) and the Business and Industry Advisory Council (BIAC) to the Organisation for Economic Cooperation and Development (OECD).